

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
29 October 2020 (29.10.2020)



(10) International Publication Number
WO 2020/219681 A1

(51) International Patent Classification:

A61K 39/395 (2006.01) A61P 35/00 (2006.01)
C07K 16/28 (2006.01) A61K 39/00 (2006.01)

(21) International Application Number:

PCT/US2020/029531

(22) International Filing Date:

23 April 2020 (23.04.2020)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/837,518	23 April 2019 (23.04.2019)	US
62/859,699	10 June 2019 (10.06.2019)	US
20305145.3	17 February 2020 (17.02.2020)	EP
20305146.1	17 February 2020 (17.02.2020)	EP

(71) Applicants: **SANOPI** [FR/FR]; 54 rue La Boétie, 75008 Paris (FR). **GENZYME CORPORATION** [US/US]; 50 Binney Street, Cambridge, Massachusetts 02142 (US).

(72) Inventors: **CAMERON, Béatrice**; c/o Sanofi, 54 rue La Boétie, 75008 Paris (FR). **CHIRON BLONDEL, Marielle**; c/o Sanofi, 54 rue La Boétie, 75008 Paris (FR). **DUMAS, Jacques**; c/o Sanofi, 54 rue La Boétie, 75008 Paris (FR). **FOURNIER, Alain**; c/o Sanofi, 54 rue La Boétie, 75008 Paris (FR). **KINGSBURY, Jonathan**; c/o Sanofi, 55 Corporate Drive, Mail Code 55A-525, Bridgewater, New Jersey 08807 (US). **LEMOINE, Cendrine**; c/o Sanofi, 54 rue La Boétie, 75008 Paris (FR). **MURRAY, Brian**; c/o Sanofi, 55 Corporate Drive, Mail Code 55A-525, Bridgewater, New Jersey 08807 (US). **OSTBERG, Nathan**; c/o Sanofi, 55 Corporate Drive, Mail Code 55A-525, Bridgewater, New Jersey 08807 (US). **PATKE, Sanket**; c/o Sanofi, 55 Corporate Drive, Mail Code 55A-525, Bridgewater, New Jersey 08807 (US). **VIRONE-ODDÖS, Angela**; c/o Sanofi, 54 rue La Boétie, 75008 Paris (FR). **ZHANG, Zichuan**; c/o Sanofi, 55 Corporate Drive, Mail Code 55A-525, Bridgewater, New Jersey 08807 (US).

(74) Agent: **VELEMA, James H.**; 28 State Street, Boston, Massachusetts 02109 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA,

SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))
- with sequence listing part of description (Rule 5.2(a))

WO 2020/219681 A1

(54) Title: ANTI-CD38 ANTIBODIES AND FORMULATIONS

(57) Abstract: Provided herein are antibodies that specifically bind human CD38, formulations and unit dosage forms comprising the antibodies, methods of preparing the antibodies and methods of using the antibodies.